

CLAIMS

What is claimed is:

1 1. A method for communicating electronic information comprising the computer-
2 implemented steps of:
3 intercepting a message that has been sent from a first participant to a second
4 participant prior to said message arriving at said second participant;
5 wherein said first participant is one of a service requestor and a service
6 provider and the second participant is the other of the service requestor
7 and the service provider; and
8 determining the identity of the first participant based on information in said message.

1 2. The method of Claim 1 wherein:
2 the step of intercepting a message is performed by a device coupled between a
3 plurality of clients and a plurality of servers;
4 the method further comprising the step of identifying which services are being
5 provided to said clients by said servers based on the content of messages that
6 pass through said device; and
7 billing said clients for said services based on which services are being provided to
8 said clients by said servers.

1 3. The method of Claim 2 wherein:
2 the device is controlled by a first party, and the services are provided by a set of
3 second parties; and
4 the first party performs the step of billing on behalf of the set of second parties.

1 4. The method for Claim 1 further comprising the computer-implemented
2 steps of:
3 determining whether said message has billing implications;
4 if said message has billing implications, then generating a log; and
5 using said log to charge said a particular participant for a service
6 indicated in the message, wherein said particular participant is
7 one of said first participant and said second participant.

1 5. The method for Claim 4 wherein the log includes a service requestor
2 identification.

1 6. The method for Claim 4 wherein the log includes information to indicate
2 how much the particular participant is to pay for the service.

1 7. The method for Claim 4 further comprising the computer-implemented
2 step of sending a plurality of logs, including said log, to an aggregation
3 engine that places access information contained in said plurality of logs
4 into the format required by a billing system.

1 8. The method for Claim 4 further comprises:
2 determining that the particular participant must pre-pay for the service;
3 determining whether the particular participant has sufficient funds to pay for the
4 service; and

5 determining how to handle said message based on whether said particular participant
6 has sufficient funds to pay for the service.

1 9. The method for Claim 4 further comprising the computer-implemented steps of:
2 inspecting a provider profile associated with the service provider; and
3 determining that the service requestor must pre-pay for the service based on the
4 provider profile.

1 10. The method for Claim 4 further comprising the computer-implemented steps of:
2 inspecting a requestor profile associated with the service requestor; and
3 determining that the service requestor must pre-pay for the service based on the
4 requestor profile.

1 11. The method for Claim 4 further wherein the message is a response from the service
2 provider and includes a price at which the service provider is willing to provide the
3 service.

1 12. The method for Claim 4 wherein the service involves providing content from the
2 service provider.

1 13. The method for Claim 1 further comprising the steps of:
2 determining a service class for said first participant based on the identity of the first
3 participant; and
4 determining where to direct said message to based on said service class.

- 1 14. The method for Claim 4 further comprising the steps of:
2 determining a service class for said first participant based on the identity of the first
3 participant; and
4 wherein the service that the service requestor is provided is determined by said
5 service class.
- 1 15. The method for Claim 4 further comprising the step of updating a profile based on the
2 service that is requested.
- 1 16. The method for Claim 4 further comprising the step of decrementing an account
2 balance when the service requestor accesses the service.
- 1 17. The method for Claim 4 further comprising the step of determining from the message
2 the service that is requested by the service requestor.
- 1 18. The method for Claim 1 further comprising the computer-implemented step of:
2 locating a profile based on the identity of the first participant.
- 1 19. The method for Claim 18 further comprising the computer-implemented step of:
2 storing billing data associated with the service requestor in the profile.
- 1 20. The method for Claim 18 further comprising the computer-implemented step of:
2 determining a price that the service requestor will pay for a service from the profile.

1 21. The method for Claim 18 further comprising the computer-implemented step of:
2 billing the service requestor if the profile indicates that the service requestor is to be
3 billed.

1 22. The method for Claim 18 wherein the step of locating the profile further comprises
2 the computer-implemented step of:
3 extracting a participant ID from the message; and
4 locating the profile based on a participant ID.

1 23. The method for Claim 18 further comprising maintaining an account balance in the
2 profile.

1 24. The method for Claim 18 further comprising decrementing the account balance when
2 the service requestor accesses a service wherein the service was specified in the
3 message and wherein the service requires a fee.

1 25. The method for Claim 18 further comprising updating the profile to award the service
2 requestor a prize for having requested said service.

1 26. The method for Claim 18 further comprising the computer-implemented steps of.
2 extracting a number from the profile;
3 wherein the number indicates the number of times the service requestor has
4 requested a service;

5 incrementing the number;
6 storing the number back into the profile; and
7 determining whether to bill the service requestor for the service based on the number.

1 27. The method for Claim 1 further comprising the computer-implemented step of:
2 determining whether the service requestor is allowed access to a service based on
3 information in a profile.

1 28. The method for Claim 27 further comprising the computer-implemented steps of:
2 if the service requestor is not allowed access to the service, then
3 sending the service requestor a second message indicating that the service
4 requestor is not allowed access to the service.

1 29. The method for Claim 1 further comprising the computer-implemented steps of:
2 if the service requestor requires pre-authorization for a service
3 sending the service requestor a payment authorization message; and
4 if the service requestor authorizes payment for the service, then
5 retransmitting the message to the service provider to obtain the service for the
6 service requestor.

1 30. The method for Claim 29 further comprising inspecting a profile to determine
2 whether the service requestor requires pre-authorization for the service.

1 31. The method for Claim 1 further comprising the computer-implemented steps of:

2 determining whether the service requestor has funds to pay for a service based on an
3 authorization source.

1 32. The method for Claim 31 further comprising the computer-implemented steps of:
2 if the service requestor has the funds, then
3 causing the funds to be decremented from a requestor account associated with
4 the service requestor; and
5 retransmitting the message to the service provider to obtain the service for the
6 service requestor.

1 33. The method for Claim 31 wherein the authorization source is a profile.

1 34. The method for Claim 31 wherein the authorization source is a billing system.

1 35. The method for Claim 31 wherein the authorization source is a billing scheme of an
2 access provider.

1 36. The method for Claim 1 further comprising the computer-implemented steps of:
2 determining whether the service provider is an authorized partner; and
3 if the service provider is an authorized partner, then
4 retransmitting the message to the service provider to obtain a service.

1 37. The method for Claim 36 wherein the step of determining whether the service
2 provider is an approved partner further comprises the computer-implemented steps of:

3 determining whether the service involves a fee by inspecting a provider profile;
4 if the service does involve a fee, then
5 establishing a secure connection with the provider; and
6 authenticating the service provider by using an authentication mechanism.

1 38. A computer-readable medium carrying instructions for communicating electronic
2 information, the instructions comprising instructions for performing the steps of:
3 intercepting a message sent from a first participant to a second participant prior to said
4 message arriving at said second participant;
5 wherein said first participant is one of a service requestor and a service
6 provider and the second participant is the other of the service requestor
7 and the service provider; and
8 determining the identity of the first participant based on information in said message.

1 39. The computer-readable medium for Claim 38 further comprising
2 instructions for:
3 determining whether said message has billing implications;
4 if said message has billing implications, then generating a log; and
5 using said log to charge said a particular participant for a service
6 indicated in the message, wherein said particular participant is
7 one of said first participant and said second participant.

1 40. The computer-readable medium for Claim 39 wherein the log includes a
2 service requestor identification.

1 41. The computer-readable medium for Claim 39 wherein the log includes
2 information to indicate how much the particular participant is to pay for
3 the service.

1 42. The computer-readable medium for Claim 39 further comprising
2 instructions for sending a plurality of logs, including said log, to an
3 aggregation engine that places access information contained in said
4 plurality of logs into the format required by a billing system.

1 43. The computer-readable medium for Claim 39 further comprises instructions for:
2 determining that the particular participant must pre-pay for the service;
3 determining whether the particular participant has sufficient funds to pay for the
4 service; and
5 determining how to handle said message based on whether said particular participant
6 has sufficient funds to pay for the service.

1 44. The computer-readable medium for Claim 39 further comprising instructions for:
2 inspecting a provider profile associated with the service provider; and
3 determining that the service requestor must pre-pay for the service based on the
4 provider profile.

1 45. The computer-readable medium for Claim 39 further comprising instructions for:
2 inspecting a requestor profile associated with the service requestor; and

3 determining that the service requestor must pre-pay for the service based on the
4 requestor profile.

1 46. The computer-readable medium for Claim 39 wherein the message is a response from
2 the service provider and includes a price at which the service provider is willing to
3 provide the service.

1 47. The computer-readable medium for Claim 39 wherein the service involves providing
2 content from the service provider.

1 48. The computer-readable medium for Claim 38 further comprising instructions for:
2 determining a service class for said first participant based on the identity of the first
3 participant; and
4 determining where to direct said message to based on said service class.

1 49. The computer-readable medium for Claim 39 further comprising instructions for:
2 determining a service class for said first participant based on the identity of the first
3 participant; and
4 wherein the service that the service requestor is provided is determined by said
5 service class.

1 50. The computer-readable medium for Claim 39 further comprising instructions for
2 updating a profile based on the service that is requested.

- 1 51. The computer-readable medium for Claim 39 further comprising instructions for
2 decrementing an account balance when the service requestor accesses the service.
- 1 52. The computer-readable medium for Claim 39 further comprising instructions for
2 determining from the message the service that is requested by the service requestor.
- 1 53. The computer-readable medium for Claim 38 further comprising instructions for:
2 locating a profile based on the identity of the first participant.
- 1 54. The computer-readable medium for Claim 53 further comprising instructions for:
2 storing billing data associated with the service requestor in the profile.
- 1 55. The computer-readable medium for Claim 53 further comprising instructions for:
2 determining a price that the service requestor will pay for a service from the profile.
- 1 56. The computer-readable medium for Claim 53 further comprising instructions for:
2 billing the service requestor if the profile indicates that the service requestor is to be
3 billed.
- 1 57. The computer-readable medium for Claim 53 wherein instructions for locating the
2 profile further comprises instructions for:
3 extracting a participant ID from the message; and
4 locating the profile based on a participant ID.

1 58. The computer-readable medium for Claim 53 further comprising instructions for
2 maintaining an account balance in the profile.

1 59. The computer-readable medium for Claim 53 further comprising instructions for
2 decrementing the account balance when the service requestor accesses a service
3 wherein the service was specified in the message and wherein the service requires a
4 fee.

1 60. The computer-readable medium for Claim 53 further comprising instructions for
2 updating the profile to award the service requestor a prize for having requested said
3 service.

1 61. The computer-readable medium for Claim 53 further comprising instructions for.
2 extracting a number from the profile;
3 wherein the number indicates the number of times the service requestor has
4 requested a service;
5 incrementing the number;
6 storing the number back into the profile; and
7 determining whether to bill the service requestor for the service based on the number.

1 62. The computer-readable medium for Claim 38 further comprising instructions for:
2 determining whether the service requestor is allowed access to a service based on
3 information in a profile.

1 63. The computer-readable medium for Claim 62 further comprising instructions for:
2 if the service requestor is not allowed access to the service, then
3 sending the service requestor a second message indicating that the service
4 requestor is not allowed access to the service.

1 64. The computer-readable medium for Claim 38 further comprising instructions for:
2 if the service requestor requires pre-authorization for a service
3 sending the service requestor a payment authorization message; and
4 if the service requestor authorizes payment for the service, then
5 retransmitting the message to the service provider to obtain the service for the
6 service requestor.

1 65. The computer-readable medium for Claim 64 further comprising instructions for
2 inspecting a profile to determine whether the service requestor requires pre-
3 authorization for the service.

1 66. The computer-readable medium for Claim 38 further comprising instructions for:
2 determining whether the service requestor has funds to pay for a service based on an
3 authorization source.

1 67. The computer-readable medium for Claim 66 further comprising instructions for:
2 if the service requestor has the funds, then
3 causing the funds to be decremented from a requestor account associated with
4 the service requestor; and

5 retransmitting the message to the service provider to obtain the service for the
6 service requestor.

1 68. The computer-readable medium for Claim 66 wherein the authorization source is a
2 profile.

1 69. The computer-readable medium for Claim 66 wherein the authorization source is a
2 billing system.

1 70. The computer-readable medium for Claim 66 wherein the authorization source is a
2 billing scheme of an access provider.

1 71. The computer-readable medium for Claim 38 further comprising instructions for:
2 determining whether the service provider is an authorized partner; and
3 if the service provider is an authorized partner, then
4 retransmitting the message to the service provider to obtain a service.

1 72. The computer-readable medium for Claim 71 wherein instructions for determining
2 whether the service provider is an approved partner further comprise instructions for:
3 determining whether the service involves a fee by inspecting a provider profile;
4 if the service does involve a fee, then
5 establishing a secure connection with the provider; and
6 authenticating the service provider by using an authentication mechanism.